OPHTHALMOLOGY – PAPER 1 – MARCH 2003

QUESTION 1
An eye which has had no previous surgery is to undergo cataract surgery. Discuss the components of the formula used to calculate the power of the IOL to be implanted. Describe how you would ensure that the measurements used in this formula are accurate. Give the specific formula for calculation of the IOL power that you would use in different clinical situations.

QUESTION 2
A 10 year old girl has been sent to you complaining of headaches. Give your differential diagnosis and management.

QUESTION 3
Describe in detail the various visual field changes that can be caused by a single focal lesion at each of the following sites in the visual pathway: (a) optic nerve, (b) optic chiasm, (c) temporal lobe, (d) parietal lobe, (e) occipital lobe. Give examples of common causes of each field defect at each of these sites. Give the additional symptoms and signs which commonly occur at the initial presentation of a single lesion at each site.

QUESTION 4
A 35 year old male delivery driver presents with insulin dependent diabetes present for 15 years and with sub-optimal control. Two years ago he had some pan-retinal photocoagulation in each eye for proliferative disease. The patient had discomfort from the laser treatment and was lost to followup. The right eye has had vitreous haemorrhages 18 months ago and 4 weeks ago. Visual acuity: right hand movements, left 6/24. There is a dense right vitreous haemorrhage, the left ocular media are clear. He is anxious about his ability to continue employment. Discuss your management.

OPHTHALMOLOGY – PAPER 2A – MARCH 2003

Question 1
A 45 year old man presents with blurred vision and you find left uveitis with a retinal detachment.
(a) What signs indicate the retinal detachment is exudative and not rhegmatogenous?
(b) You decide that the retinal detachment is exudative. What are the differential diagnoses and what symptoms and signs would support each diagnosis?
(c) The patient returns a month later and you find the uveitis has become bilateral. What are the differential diagnoses and what symptoms and signs would support each diagnosis?

Question 2
Describe the relative advantages and disadvantages of fluorescein angiography and indocyanine green angiography. List the equipment and drugs you would have on hand to treat a patient who has an adverse reaction during one of these two procedures.

Question 3
A 65 year old man presents with a branch retinal vein occlusion affecting the macula.
(a) How would you assess the duration of the occlusion by the presence of different ocular signs?
(b) What signs would you look for on fluorescein angiography which will influence visual prognosis?
(c) Describe in detail how would you treat this man and the possible outcomes of your treatment.

Question 4

(a) A two week old child is brought to you with bilateral cloudy corneas. What is the most important diagnosis to make?

(b) Name two important metabolic conditions and one infectious condition which may cause cloudy cornea in a normal sized eye.

(c) History taking establishes that the child was born with the assistance of forceps. Examination under anaesthesia is undertaken. It is found that the corneas, although steamy, permit a view of the iris and ocular fundus. List five important signs or measurements you would look for.

(d) Ruptures are seen in Descemet's membrane running parallel to the limbus. Corneal diameters are 12.5 mm in the right eye and 10.5 mm in the left eye. What is the likely cause of the corneal abnormality in each eye?

(e) What are the treatment options for this child's eyes and what aspects of the examination will indicate which form of treatment is indicated?

(f) Your surgical treatment restores clarity to the corneas. Name four other conditions which may remain an obstacle to the visual rehabilitation of this child.

Question 5

Compare and contrast the symptoms and signs of vernal keratoconjunctivitis and atopic keratoconjunctivitis.

Question 6

Discuss the differential diagnosis and radiological findings in a four year old boy who presents with a slightly tender mass which is palpable just under the upper temporal rim of the right orbit.

Question 7

Describe the clinical findings in isolated fourth nerve palsies.

Question 8

A 14 year old asthmatic boy with keratoconus has been wearing hard contact lenses for two years. He complains that his vision with his contact lenses is not good enough for him to play cricket. His vision with refraction is:

R $-7.50/-8.00 \times 145 = 6/60$ L $-1.50/-2.00 \times 85 = 6/9$

a. What surgical treatment can be given to correct the poor vision in his right eye?

b. What advice would you give him about:

(i) Post-operative vision and

(ii) Post-operative care of this right eye?

c. Two years later after surgical treatment of the right eye, refraction is?

$+10.00/-4.00 \times 35 = 6/6$

Give three possible reasons why this eye is so hypermetropic.

d. The same patient is now aged 21. He has been using steroid drops qid to his right eye for six weeks and presents with blurred vision in this eye. The corneal stroma is of normal thickness but the epithelium is oedematous.

(i) What causes this appearance?

(ii) What would be your management?

e. What commonly used agent would not be appropriate for treatment of his raised intra-ocular pressure and why?

Question 9

A 20 year old female student nurse presents to your office with unequal pupils. What are the differential diagnoses and what signs would support each diagnosis?

Question 10

Your patient with a right ptosis requires a tensilon test. Outline how you would do this test and what you would tell the patient.